

Atty Dkt. No.: 10991398-1
USSN: 09/919,643

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REMARKS

In view of the following remarks, the Examiner is requested to allow Claims 1-2 and 4-28, the only claims pending and under examination in this application.

Claim 1 has been amended to include the element recited in Claim 3. Consequently, Claim 3 has been cancelled. Claim 4 has been amended to correct its dependency. Accordingly, no new matter has been added.

As no new matter has been added by way of this amendment, entry thereof by the Examiner is respectfully requested.

Claim Rejections

Claims 1-28 remain rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Deeg et al. (USPN 5,338,688).

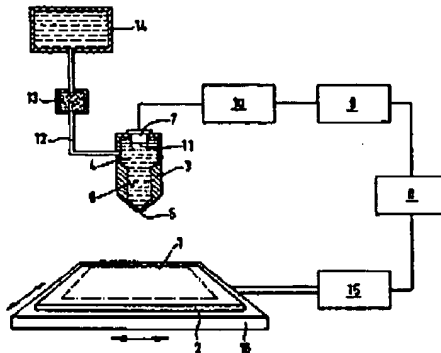
The rejected claims are directed to methods for depositing a quantity of a fluid containing a protein of interest onto the surface of a substrate. The methods include the step of front loading a fluid into a thermal inkjet head. As defined within the claim, the front loading is by contacting an orifice with the fluid in a manner so that the fluid flows through the orifice and into a firing chamber. Accordingly, an element of rejected Claims 1, 12, 17, 22, and the claims dependent therefrom, is front loading a fluid into an inkjet head by contacting an orifice with the fluid in a manner so that the fluid flows through the orifice and into a firing chamber.

The Applicants contend that nowhere does Deeg teach front loading a fluid into an inkjet head by contacting an orifice with the fluid in a manner so that the fluid flows through the orifice and into a firing chamber.

Deeg discloses the apparatus set forth in Fig. 1, below. As can be seen with reference to Fig. 1, element 3 represents the jet head, element 4 represents the jet

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chamber and element 14 represents a reservoir containing an analytical fluid 6 to be delivered to the surface of the substrate. Reservoir 14 is connected to jet chamber 4 via line 12, which is intersected by filter 12.



As can be seen with reference to the above, Deeg does not teach front loading a fluid into an inkjet head, let alone, front loading the inkjet head by contacting an orifice with the fluid in a manner so that the fluid flows through the orifice and into a firing chamber. Deeg does not teach this because Deeg discloses that prior to printing, the analytical fluid 6 is delivered from the reservoir 14 to the jet chamber 4 wherein the fluid is heated by element 7 and ejected via orifice 5. Hence, because the analytical fluid is delivered to the jet head 3 from the reservoir 14 via line 12, it is clear that the jet head 3 is not front loaded by contacting an orifice with the fluid in a manner so that the fluid flows through the orifice and into a firing chamber.

However, the Office equates the term "front loading" with "capillary action" and asserts that the apparatus disclosed in Deeg would inherently have the front loading capability as claimed by the Applicants. The Office, therefore, asserts that because the Deeg apparatus is capable of being front loaded that Deeg teaches front loading.

The Applicants, however, respectfully disagree. The Applicants' claims are not directed to an apparatus, but rather to a method of using an apparatus. Hence, simply because the Deeg apparatus may be capable of being front loaded does not mean the Deeg actually teaches the method of front loading that apparatus by

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contacting an orifice of the apparatus with a fluid in a manner so that the fluid flows through the orifice and into a firing chamber.

In fact, when Deeg is viewed as a whole it is clear that Deeg simply does not teach or suggest front loading, let alone front loading by contacting an orifice of an inkjet head with the fluid in a manner so that the fluid flows through the orifice and into a firing chamber. Rather, to the extent that Deeg discloses loading the jet chamber with an analytical fluid, Deeg discloses that the analytical fluid is delivered to the jet chamber from reservoir 14 via line 12. If the Deeg apparatus were meant to be front loaded there would be no purpose for line 12, filter 13 and reservoir 14. Further, given the configuration of the Deeg apparatus, it is not clear to the Applicants that the capillary forces described by the Office would be enough to cause the analytical fluid to be drawn up through the jet chamber 4, to make a 90° turn into line 12, to make another 90° turn upward against gravity, through filter 13 and into reservoir 14.

Accordingly, in view of the above, the Applicants contend that Deeg is deficient in that it fails to teach every element of the rejected claims, namely, front loading a fluid into an inkjet head by contacting an orifice of the inkjet head with the fluid in a manner so that the fluid flows through the orifice and into a firing chamber. Therefore, the Applicants respectfully request that the 35 U.S.C. § 102 rejection of Claims 1-28 be withdrawn.

Claims 1, 2 and 9 remain rejected under 35 U.S.C. § 102(a) as allegedly being anticipated by Caren et al. (USPN 6,221,653).

As set forth above, Claim 1 has been amended to incorporate the element of Claim 3. As Claim 3 was not recited in this rejection, the Applicants respectfully request this rejection be withdrawn.

Claims 1, 2, 9 and 11 remain rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Caren et al. (USPN 6,797,469).

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As set forth above, Claim 1 has been amended to incorporate the element of Claim 3. As Claim 3 was not recited in this rejection, the Applicants respectfully request this rejection be withdrawn.

Claims 1, 2, 9 and 11 remain rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 19-21 and 23 of U.S. Patent No. 6,797,469.

As set forth above, Claim 1 has been amended to incorporate the element of Claim 3. As Claim 3 was not recited in this rejection, the Applicants respectfully request this rejection be withdrawn.

Claims 1, 2 and 9 remain rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 5-7, 9, 10, 12 and 23 of U.S. Patent No. 6,221,653.

As set forth above, Claim 1 has been amended to incorporate the element of Claim 3. As Claim 3 was not recited in this rejection, the Applicants respectfully request this rejection be withdrawn.

Claims 1, 2, 9 and 11 remain rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, 9, 11-13, 15 and 18 of U.S. Patent No. 6,656,740.

As set forth above, Claim 1 has been amended to incorporate the element of Claim 3. As Claim 3 was not recited in this rejection, the Applicants respectfully request this rejection be withdrawn.

Claims 1, 2, 6, 7 and 8 remain rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5, 7 and 11-19 of U.S. Patent No. 6,323,043 and claims 1, 2, 4 and 6 of its related U.S. Patent No. 6,884,580.

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As set forth above, Claim 1 has been amended to incorporate the element of Claim 3. As Claim 3 was not recited in this rejection, the Applicants respectfully request this rejection be withdrawn.

Claims 1-4 remain rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 8, 12, 14, 15 and 18 of U.S. Patent No. 6,242,266.

An element of the rejected claims is front loading a fluid containing a protein into an inkjet head. The Office has not demonstrated where Caren '266 teaches front loading a fluid containing a protein into an inkjet head. Accordingly, the Applicants respectfully request that the obviousness-type double patenting rejection of Claims 1-4 be withdrawn.

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CONCLUSION

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Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Timothy Joyce at (408) 553-2510.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-1078, order number 10991398-1.

Respectfully submitted,

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